



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

October 5, 2005

CANTOR COLBURN, LLP
55 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
US

Dear Sir/Madam,

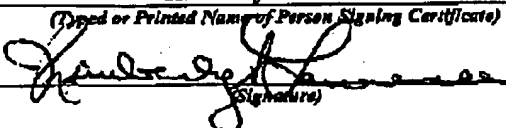
Your refund request for 10645406 in the amount of \$100.00 has been denied .

The money was needed for the claims. Claims number 1, 20, 22, 26, and 27 are independent claims.

Sincerely,

ELEANOR KURTZ
Technical Center Others
703 308-9010 x177

PATENT MAINTENANCE
DND/DO

CERTIFICATE OF TRANSMISSION BY FACSIMILE (37 CFR 1.8) Applicant(s): Timothy LaBoube et al.			Docket No. GEN-0391/41PR-132813	
Application No. 10/645,406	Filing Date 8/21/2003	US PATENT & TRADEMARK OFFICE Nguyen, Tuyen T.	Group Art Unit 2832	
Invention: APPARATUS AND METHOD FOR COOLING ELECTRICAL TRANSFORMERS				
RECEIVED CENTRAL FAX CENTER AUG 09 2005				
I hereby certify that this <u>Refund Request (2 pages), Fee Trans Ex. A and Dep Acct statement Ex. B (2 pages)</u> (Identify type of correspondence) is being facsimile transmitted to the United States Patent and Trademark Office (Fax. No. <u>571-273-8300</u>) on <u>August 9, 2005</u> (Date)				
<u>Kimberly A. Lawrence</u> (Typed or Printed Name of Person Signing Certificate)  (Signature)				
Note: Each paper must have its own certificate of mailing.				

P18/REV02

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OFFICE

2005 AUG 11 PM 3 24

GEN-0391/41PR-132813

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Timothy LaBoube et al.)
Serial No: 10/645,406) Group Art Unit: 2832
Filed: 8/21/2003) Examiner:
) Nguyen, Tuyen T.
)

For: APPARATUS AND METHOD FOR COOLING ELECTRICAL TRANSFORMERS

REQUEST FOR REFUNDRECEIVED
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AUG 09 2005

Mail Stop 16
Director of the U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Attn: Refund Section, Accounting Division, Office of Finance

Sir:

In accordance with 37 CFR 1.26(b), Applicants respectfully request a refund of the fees in the amount of \$100.00. On July 14, 2005 Applicants authorized the debit of \$100.00 from the 06-1130 account for two additional claims that were included in an Amendment for the above application. However, on July 20, 2005 a total of \$200.00 was charged to the account. A copy of the Amendment Transmittal Form and a copy of the deposit account statement are attached hereto as Exhibit A and B respectively.

In Exhibit A, it is shown that prior to the amendment there were (25) claims total and (4) independent claims, and that subsequent to the amendment there were (27) claims total and (4) independent claims. Thus, only (2) dependent claims were introduced.

GEN-0191/41PR-132813

Therefore, Applicants respectfully requests a refund in the amount of \$100.00 be credited
to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By: 

David Arnold
Registration No. 48,894
Customer No. 23413
55 Griffin Road South
Bloomfield, CT 06002
Telephone: 860-286-2929
Facsimile: 860-286-0115

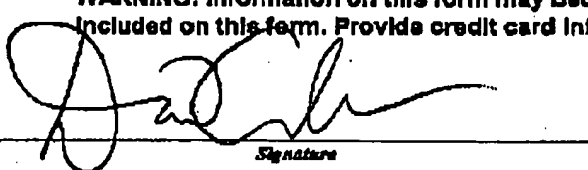
Date

August 8, 2005

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Exhibit

A

AMENDMENT TRANSMITTAL LETTER (Large Entity)					Docket No. 41PR-132813/GEN-0391	
Applicant(s): Timothy LaBoube et al.						
Application No. 10/645,406	Filing Date 8/21/2003	Examiner Nguyen, Tuyen T.	Customer No. 23413	Group Art Unit 2832	Confirmation No. 7779	
Invention: APPARATUS AND METHOD FOR COOLING ELECTRICAL TRANSFORMERS						
COMMISSIONER FOR PATENTS:						
Transmitted herewith is an amendment in the above-identified application. The fee has been calculated and is transmitted as shown below.						
CLAIMS AS AMENDED						
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE	
TOTAL CLAIMS	27 -	25 -	2	x \$50.00	\$100.00	
INDEP. CLAIMS	3 -	3 -	0	x \$200.00	\$0.00	
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00	
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT					\$100.00	
<input type="checkbox"/> No additional fee is required for amendment. <input checked="" type="checkbox"/> Please charge Deposit Account No. 06-1130 in the amount of \$100.00 <input type="checkbox"/> A check in the amount of to cover the filing fee is enclosed. <input checked="" type="checkbox"/> The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account <input checked="" type="checkbox"/> Any additional filing fees required under 37 C.F.R. 1.16. <input type="checkbox"/> Any patent application processing fees under 37 CFR 1.17. <input type="checkbox"/> Payment by credit card. Form PTO-2038.						
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.						
 Signature			Dated: July 14, 2005			
David Arnold Registration No. 48,894 Cantor Colburn LLP 55 Griffin Road South Bloomfield, CT 06002 phone: 860-286-2929 fax: 860-286-0115			I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____ (Date) _____ Signature of Person Mailing Correspondence _____ Typed or Printed Name of Person Mailing Correspondence			
CC:						

P11LARGEREV09

Deposit Account Statement

Exhibit

B

07/19 97	10392044	H0004521	8021	\$40.00	\$28,71:
07/19 108	11178142	LEE-0027	8021	\$40.00	\$28,87:
07/19 123	11020835	140512-2	8021	\$40.00	\$28,63:
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07/19 137	11182582	184898/GIN-0043	1111	\$500.00	\$25,83:
07/19 138	11182582	184898/GIN-0043	1311	\$200.00	\$25,83:
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07/20 1	10645406	41PR-132813(GEN-0391)	1201	\$200.00	\$23,91:
07/20 8	PCT/US05/21530	RIK-0003-F	8007	\$20.00	\$23,89:
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07/20 34	11183598	KOT-0177	1111	\$500.00	\$42,98:
07/20 34	78215808		6003	\$100.00	\$42,88:
07/20 35	11183598	KOT-0177	1311	\$200.00	\$42,68:
07/20 39	60700227	H0008480	1005	\$200.00	\$42,48:
07/20 44	11121463	YOM-0118	1051	\$130.00	\$42,33:
07/20 48	11083551	94-1006-C	1011	\$300.00	\$42,03:
07/20 49	11083551	94-1006-C	1111	\$500.00	\$41,53:
07/20 50	11083551	94-1006-C	1311	\$200.00	\$41,33:
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07/20 59	11183894	KOT-0174	1311	\$200.00	\$40,08:
07/20 60	11120248	YOM-0139	1051	\$130.00	\$39,85:
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07/20 66	11183088	21C-0218	1311	\$200.00	\$38,02:
07/20 87	11183808	KOT-0175	1311	\$200.00	\$37,82:
07/20 87	11183088	21C-0218	1201	\$200.00	\$37,62:
07/20 88	11183088	21C-0218	1202	\$600.00	\$37,02:
07/20 82	11183445	KOT-0173	1011	\$300.00	\$36,72:
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07/20 84	11183445	KOT-0173	1311	\$200.00	\$36,02:
07/20 92	11183705	KOT-0176	1011	\$300.00	\$35,72:
07/20 93	11183705	KOT-0176	1111	\$500.00	\$35,22:

Appl. No. 10/645,406
Docket No. 41PR-132813/GEN-0391

19. (original) The method of Claim 18, wherein:

the sensing the temperature of a winding of the transformer via a second thermal switch comprises sensing at each phase the temperature of a winding of the transformer via a second thermal switch disposed at each phase;

the sensing the temperature of a winding of the transformer via a third thermal switch comprises sensing at each phase the temperature of a winding of the transformer via a third thermal switch disposed at each phase;

the actuating an alarm comprises actuating an alarm in response to the sensed temperature at any of the second thermal switches exceeding the second temperature threshold; and

the actuating an electrical disconnect comprises actuating an electrical disconnect in response to the sensed temperature at any of the third thermal switches exceeding the third temperature threshold.

20. (original) A transformer assembly, comprising:

a three-phase dry-type transformer having at each phase a primary winding with a primary connection and a secondary winding with a secondary connection;

a first, second, and third thermal switch at each phase in thermal communication with the respective primary winding, secondary winding, or combination thereof; and

a fan at each phase in signal communication with the respective first thermal switch, and arranged for fluid communication with the respective primary winding, secondary winding, or combination thereof;

wherein each fan is responsive to the respective first thermal switch for directing an airflow toward the respective primary winding, secondary winding, or combination thereof, in response to a respective winding temperature being in excess of a first temperature threshold;

wherein the second thermal switch at each phase is arranged to provide a signal indicative of a respective winding temperature being in excess of a second temperature threshold;

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Doctet No. 41PR-132813/GEN-0391

wherein the third thermal switch at each phase is arranged to provide a signal indicative of a respective winding temperature being in excess of a third temperature threshold;

wherein the first temperature threshold is less than the second temperature threshold, and the second temperature threshold is less than the third temperature threshold.

21. (original) The assembly of Claim 20, further comprising:
a support member having a lifting surface arranged for lifting the assembly; and
a housing having a first vent for permitting air passage into the housing, and a second vent for permitting air passage out of the housing;
wherein the primary and secondary connection at each phase are disposed on the same side of the three-phase transformer.

22. (original) A transformer assembly, comprising:
a transformer;
a sensor in signal communication with the transformer for sensing an operating characteristic thereof; and
an airflow generator in signal communication with the sensor and arranged for fluid communication with the transformer;
wherein the airflow generator is responsive to the sensor for directing an airflow toward the transformer in response to the sensed operating characteristic being desirous of an airflow at the transformer.

23. (original) The assembly of Claim 22, wherein the operating characteristic desirous of an airflow at the transformer is a temperature value, a humidity level, a power ON condition, or any combination comprising at least one of the foregoing.

Apph. No. 10/643,406
Docket No. 4172-13281/OEN-0391

24. (original) The assembly of Claim 23, wherein the sensor senses the power ON condition at the transformer and the airflow generator is responsive thereto.

25. (original) The assembly of Claim 24, further comprising:
a second and a third sensor in signal communication with the transformer, the second sensor arranged for signal communication with an alarm device, the third sensor arranged for signal communication with an electrical disconnect device;
a support member having a lifting surface arranged for lifting the assembly; and
a housing having a first vent for permitting air passage into the housing and a second vent for permitting air passage out of the housing.

26. (new) A transformer assembly, comprising:
a transformer;
a thermal sensing and control device in thermal communication with the transformer;
a cooling device in signal communication with the thermal sensing and control device, and arranged for cooling the transformer on command; and
an electrical disconnect device in signal communication with the thermal sensing and control device, and arranged for disconnecting the transformer from a source of electrical power on command;
wherein the cooling device is responsive to a first signal from the thermal sensing and control device, and the electrical disconnect is responsive to a second signal from the thermal sensing and control device.

27. (new) A method of operating a transformer assembly, the assembly comprising a transformer, a thermal sensing and control device in thermal communication with the transformer, a cooling device in signal communication with the thermal sensing and control device, and arranged for cooling the transformer on command, and an electrical disconnect device in signal communication with the thermal sensing and control

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Docket No. 41PR-132813/GEN-0391

device, and arranged for disconnecting the transformer from a source of electrical power on command, the method comprising:

receiving a first signal from the thermal sensing and control device, and operating the cooling device in response thereto; and

receiving a second signal from the thermal sensing and control device, and operating the electrical disconnect device in response thereto.

AUG 09 2005 11:04AM CANTOR COLBURN LLP

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GEN-0391/41PR-132813

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Timothy LaBoube et al.)
Serial No: 10/645,406) Group Art Unit: 2832
Filed: 8/21/2003) Examiner:
) Nguyen, Tuyen T.
)

For: APPARATUS AND METHOD FOR COOLING ELECTRICAL TRANSFORMERS

REQUEST FOR REFUND

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Respectfully submitted,

CANTOR COLBURN LLP

By: 

David Arnold
Registration No. 48,894
Customer No. 23413
55 Griffin Road South
Bloomfield, CT 06002
Telephone: 860-286-2929
Facsimile: 860-286-0115

Date August 8, 2005

Apph. No. 10/645,406
Docket No. 41PR-132813/GEN-0391

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

✓ **Listing of Claims:**

1. (currently amended) ~~A transformer~~ The assembly of Claim 26, wherein comprising:

[[a]] the transformer having comprises a primary winding with a primary connection and a secondary winding with a secondary connection;

the thermal sensing and control device comprises a first thermal sensor in thermal communication with the primary winding, the secondary winding, or combination thereof; and

the cooling device comprises an airflow generator in signal communication with the first thermal sensor and arranged for fluid communication with the primary winding, the secondary winding, or combination thereof;

wherein the airflow generator is responsive to the first thermal sensor to direct an airflow toward the primary winding, secondary winding, or combination thereof, in response to a winding temperature being in excess of a first temperature threshold.

2. (original) The assembly of Claim 1, wherein the transformer is a dry-type transformer.

3. (currently amended) ~~The assembly of Claim 1, further comprising~~
wherein:

the thermal sensing and control device further comprises a second thermal sensor in thermal communication with the primary winding, the secondary winding, or combination thereof; and further comprising:

an alarm device in signal communication with the second thermal sensor;

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Doctst No. 41PR-132813/GEN-0391

wherein the alarm device is responsive to the second thermal sensor to signal an alarm condition in response to a winding temperature being in excess of a second temperature threshold.

4. (currently amended) The assembly of Claim 3, ~~further comprising~~
wherein:

the thermal sensing and control device further comprises a third thermal sensor in thermal communication with the primary winding, the secondary winding, or combination thereof; and

the an electrical disconnect device is in signal communication with the third thermal sensor and is in electrical communication with the transformer;

wherein the electrical disconnect device is responsive to the third thermal sensor to disconnect electrical power at the transformer in response to a winding temperature being in excess of a third temperature threshold.

5. (original) The assembly of Claim 4, wherein the first, second and third thermal sensors are thermal switches.

6. (original) The assembly of Claim 4, wherein the first temperature threshold is less than the second temperature threshold, and the second temperature threshold is less than the third temperature threshold.

7. (original) The assembly of Claim 6, wherein the first, second, and third temperature thresholds are less than the insulation degradation temperature rating of the transformer windings.

8. (original) The assembly of Claim 4, wherein the electrical disconnect device is a switch or a circuit breaker.

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Docket No. 41PR-132813/GEN-0391

9. (original) The assembly of Claim 1, further comprising:
a support member having a lifting surface arranged for lifting the assembly; and
a housing having a first vent for permitting air passage into the housing and a second vent for permitting air passage out of the housing.
10. (original) The assembly of Claim 4, wherein the transformer is a three-phase transformer.
11. (original) The assembly of Claim 10, wherein the electrical disconnect device is disposed proximate the central transformer of the three-phase transformer, and the user primary connections of the electrical disconnect device are disposed at the bottom of the electrical disconnect device.
12. (original) The assembly of Claim 11, wherein the electrical disconnect device is disposed on the same side of the transformer as are the secondary connections of the transformer.
13. (original) The assembly of Claim 1, wherein the airflow generator comprises a first fan arranged for directing a first airflow at a first side of the transformer and a second fan arranged for directing a second airflow at a second opposing side of the transformer.
14. (original) The assembly of Claim 9, wherein the housing further includes an interior surface insulated for sound.
15. (currently amended) ~~[[A]] The method of Claim 27 operating a transformer wherein the cooling device comprises a fan, and further comprising:~~
energizing the transformer;

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Docket No. 41PR-132813/GEN-0391

sensing the temperature of a winding of the transformer via a first thermal switch
productive of the first signal; and

actuating ~~[[a]]~~ the fan in response to the sensed temperature at the first thermal switch exceeding a first temperature threshold.

16. (original) The method of Claim 15, further comprising:

sensing the temperature of a winding of the transformer via a second thermal switch; and

actuating an alarm in response to the sensed temperature at the second thermal switch exceeding a second temperature threshold, the second temperature threshold being greater than the first temperature threshold.

17. (currently amended) The method of Claim 16, further comprising:

sensing the temperature of a winding of the transformer via a third thermal switch
productive of the second signal; and

actuating ~~on~~ the electrical disconnect in response to the sensed temperature at the third thermal switch exceeding a third temperature threshold, the third temperature threshold being greater than the second temperature threshold.

18. (original) The method of Claim 17, wherein:

the transformer comprises a three-phase transformer;

the sensing the temperature of a winding of the transformer via a first thermal switch comprises sensing at each phase the temperature of a winding of the transformer via a first thermal switch disposed at each phase; and

the actuating a fan comprises actuating a fan disposed at a phase of the transformer in response to the sensed temperature at the first thermal switch of the respective phase exceeding the first temperature threshold, each phase of the transformer having an associated first thermal switch and fan.